Amendments to the Claims

Please cancel claims 86-93 and 97.

Listing of Claims:

Claims 1-11. canceled.

Claim 12 (withdrawn) A method of promoting the growth, differentiation or survival of a MuSK receptor expressing cell comprising administering to the cell an effective amount of agrin.

Claim 13. (withdrawn) The method of claim 12, wherein the MuSK receptor expressing cell is a cell which is normally found in muscle, heart, spleen, ovary or retina.

Claim 14. (withdrawn) The method of claim 12 or 13, wherein the MuSK receptor expressing cell is a cell which has been genetically engineered to express the MuSK receptor.

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Claim 15. (withdrawn) An antibody capable of specifically binding the active portion of human agrin.

Claim 16. (withdrawn) A monoclonal antibody of claim 15.

Claim 17. (withdrawn) A polyclonal antibody of claim 15.

Claim 18. (withdrawn) A method of detecting the presence of human agrin in a sample comprising:

a) reacting the sample with an antibody of claim 15, under conditions whereby the antibody binds to human agrin present in the sample; and

b) detecting the bound antibody, thereby detecting the presence of human agrin in the sample.

Claim 19. (withdrawn) The method of claim 18, wherein the antibody is a polyclonal antibody.

Claim 20. (withdrawn) The method of claim 18, wherein the antibody is a monoclonal antibody.

Claim 21. (withdrawn) The method of claim 18, wherein the sample is a biological tissue.

Claim 22. (withdrawn) The method of claim 18, wherein the sample is a body fluid.

Claim 23. (withdrawn) The method of claim 22, wherein the body fluid is selected from the group consisting of cerebrospinal fluid, blood, serum, plasma, urine and saliva.

Claim 24. (withdrawn) The method of claim 18, wherein the sample is a cell extract.

Claims 25-46. canceled.

Claim 47 (withdrawn) Use of a polypeptide encoding the active portion of human agrin in the manufacture of a medicament for the treatment of a disease or disorder affecting muscle.

Claim 48. canceled.

Claim 49. (withdrawn) A diagnostic test kit for detecting the presence of human agrin in a sample, said kit comprising an antibody as defined in any of claims 15 to 17, and means for determining whether or not the antibody binds to human agrin, thereby allowing detection of the presence of human agrin in the sample.

Claim 50 (withdrawn) A method of treating a patient suffering from a disease or disorder affecting muscle comprising administering to the patient an effective amount of the nucleic acid molecule comprising a nucleotide sequence encoding the active portion of human agrin or a derivative thereof.

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Claim 51. (withdrawn) A nucleic acid molecule comprising a nucleotide sequence encoding the active portion of human agrin or a derivative thereof, for use in a method of treatment of the human or animal body by therapy or in a method of diagnosis.

Claim 52. (withdrawn) A nucleic acid molecule according to claim 51, for use in a method of treatment of the human or animal body of a disease or disorder that affects muscle.

Claim 53 (withdrawn) Use of a nucleic acid molecule comprising a nucleotide sequence encoding the active portion of human agrin, or a derivative thereof, in the manufacture of a medicament for the treatment of a disease or disorder affecting muscle.

Claim 54 (withdrawn) A composition comprising a nucleic acid molecule comprising a nucleotide sequence encoding the active portion of human agrin wherein the nucleic acid molecule is operatively linked to an expression control sequence.

Claim 55. canceled.

Claims 56. (withdrawn) An expression vector comprising a nucleic acid molecule comprising a

nucleotide sequence encoding the active portion of human agrin wherein the nucleic acid molecule is operatively linked to an expression control sequence.

Claims 57. (withdrawn) A host-vector system for the production of a polypeptide having the biological activity of human agrin which compriseds the vector of claim 56 in a suitable host cell.

Claim 58. Previously canceled.

Claim 59. (withdrawn) An antibody according to claim 15 substantially as hereinbefore described.

Claim 60. canceled.

Claim 61. (withdrawn) Use according to claim 47 or 53 substantially as hereinbefore described.

Claim 62. canceled.

Claim 63 (withdrawn) A kit according to claim 49 substantially as hereinbefore described.

Claim 64. (withdrawn) An isolated nucleic acid molecule comprising a nucleotide sequence encoding the MuSK-activating C-terminal fragment (portion) of human agrin, wherein the nucleotide sequence is selected from:

(a) a nucleotide sequence comprising the coding region of the MuSK-activating C-terminal fragment (portion) of human agrin contained in the vector designated as pBL-hAgrin 1 (American Type Culture Collection Accession No. 97378);

(b) a nucleotide sequence whose complement hybridizes under stringent conditions of: 0.15M NaCl/ 0.015 M sodium citrate/ 0.1% NaDod SO4 at 50 C or use of 50%(vol/vol) formamide with 0.1% bovine serum albumin/ 0.1% Ficoll/ 0.1% polyvinylpyrrolidone/ 50mM sodium phosphate buffer at pH 6.5 with 750 mM NaCl, 75 mM sodium citrate at 42Cto the nucleotide sequence of (a) and which encodes the MuSK-activating C-terminal fragment (portion) of human agrin; or

(c) a nucleotide sequence that, as a result of the degeneracy of the genetic code, differs from the nucleotide sequence of (a) or (b) and which encodes the MuSK-activating C-terminal fragment (portion) of human agrin.

Claim 65. (withdrawn) An isolated nucleic acid molecule comprising a nucleotide sequence encoding the MuSK-activating C-terminal fragment (portion) of human agrin, wherein the nucleotide sequence is selected from the group consisting of:

(a) the nucleotide sequence as set forth in Figure 15 (SEQ ID NO 35);

(b) the nucleotide sequence encoding amino acids 24 to 492 as set forth in SEQ ID NO:36.

(c) the nucleotide sequence encoding amino acids 60 to 492 as set forth in SEQ ID NO:36.

(d) the nucleotide sequence encoding amino acids 76 to 492 as set forth in SEQ ID NO:36.

(e) the nucleotide sequence encoding amino acids 126 to 492 as set forth SEQ ID NO:36.

(f) the nucleotide sequence encoding amino acids 178 to 492 as set forth in SEQ ID NO:36.

(g) the nucleotide sequence encoding amino acids 222 to 492 as set forth in SEQ ID NO:36.

(h) the nucleotide sequence encoding amino acids 260 to 492 as set forth in SEQ ID NO:36.

(i) the nucleotide sequence encoding amino acids 300 to 492 as set forth in SEQ ID NO:36.

(j) a nucleotide sequence whose complement hybridizes under stringent conditions of: 0.15M NaCl/ 0.015 M sodium citrate/ 0.1% NaDod SO4 at 50 C or use of 50%(vol/vol) formamide with 0.1% bovine serum albumin/ 0.1% Ficoll/ 0.1% polyvinylpyrrolidone/ 50mM sodium phosphate buffer at pH 6.5 with 750 mM NaCl, 75 mM sodium citrate at 42C to any of the nucleotide sequences of (a) through (i) and which encodes the MuSK-activating C-terminal fragment (portion) of human agrin; and

(k) a nucleotide sequence that, as a result of the degeneracy of the genetic code, differs from any of the nucleotide sequences of (a)- (j) and which encodes the MuSK-activating C-terminal fragment (portion) of human agrin.

Claim 64. (withdrawn) A method for inducing AchR clustering on a muscle cell comprising contacting the muscle cell with the polypeptide encoding the active portion of human agrin or a derivative thereof.

Claim 65. (withdrawn) The method of claim 64 wherein the muscle cell is in vitro.

Claim 66. (withdrawn) The method of claim 64 wherein the muscle cell is in vivo.

Claim 67. (withdrawn) The method of claim 66 wherein the muscle cell is in an animal.

Claim 68. (withdrawn) The method of claim 67 wherein the muscle cell is in a human.

Claim 69. (withdrawn) A method of inducing phosphorylation of the MuSK receptor in a muscle cell comprising contacting the muscle cell with the polypeptide encoding the active portion of human agrin, or a derivative thereof.

Claim 70. (withdrawn) The method of claim 69 wherein the muscle cell is in vitro.

Claim 71. (withdrawn) The method of claim 69 wherein the muscle cell is in vivo.

Claim 72. (withdrawn) The method of claim 71 wherein the muscle cell is in an animal.

Claim 73. (withdrawn) The method of claim 72 wherein the muscle cell is in a human.

Claim 74. (withdrawn) A method of facilitating the binding of Agrin, or a derivative thereof, to the MuSK receptor comprising contacting Agrin, or a derivative thereof, with the MuSK receptor under conditions in which Agrin, or a derivative thereof, is able to bind the MuSK receptor.

Claim 75. (withdrawn) The method of claim 74 wherein the derivative is the active C-terminal fragment (portion) of Agrin.

Claim 76. (withdrawn) A method for targeting muscle cells in an animal comprising administering to the animal a composition which comprises a molecule capable of binding to the MuSK receptor and allowing the composition to bind to the MuSK receptor.

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Claim 77. (withdrawn) The method of claim 76 wherein the molecule capable of binding to the MuSK receptor is Agrin, or a derivative thereof.

Claim 78. (withdrawn) A method of inducing AchR clustering on a muscle cell comprising contacting the muscle cell with the polypeptide of claim 70 or a derivative thereof.

Claim 79. (withdrawn) The method of claim 78 wherein the muscle cell is in vitro.

Claim 80. (withdrawn) The method of claim 78 wherein the muscle cell is in vivo.

Claim 81. (withdrawn) The method of claim 80 wherein the muscle cell is in an animal.

Claim 82. (withdrawn) The method of claim 81 wherein the muscle cell is in a human.

Claim 83. (withdrawn) A method of inducing phosphorylation of the MuSK receptor in a muscle cell comprising contacting the muscle cell with the polypeptide of claim 70, or a derivative thereof.

Claim 84. (withdrawn) The method of claim 83 wherein the muscle cell is in vitro.

Claim 85. (Currently amended) A human agrin protein capable of inducing phosphorylation of the MUSK receptor, and fragments of human agrin which retain the capacity of inducing phosphorylation of the MUSK receptor, selected from the group consisting of SEQ ID NOs:25-31 and 36.

Claims 86- 93 (Canceled).

Claim 94. (previously added) The protein of claim 85 which is pegylated.

Claim 95. (previously added) A ~~pharmaceutical~~ composition comprising the protein of claim 85 and ~~a pharmaceutically~~ acceptable carrier.

Claim 96. (currently amended) ~~A~~ The ~~pharmaceutical~~ composition of claim 95, further comprising ~~the protein of claim 85 and an~~ a a myotube-specific accessory component.

Claim 97. (Canceled)

Claim 98 (withdrawn) The method of claim 97 wherein the muscle cell is in a human.

Claim 99 (withdrawn). A method of activating the MUSK receptor comprising exposing the receptor to the protein of claim 85.

Claim 100. (withdrawn) A method of treating a patient suffering from a muscle disease or neuromuscular disorder comprising administering to the patient an effective amount of the protein of claim 85.